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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/694,530	10/27/2003	Holger Richert	SANZ-251	1899
24972 7590 01/30/2007 FULBRIGHT & JAWORSKI, LLP 666 FIFTH AVE NEW YORK, NY 10103-3198			EXAMINER BAUER, SCOTT ALLEN	
			ART UNIT	PAPER NUMBER
			2836	

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	01/30/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No. 10/694,530	Applicant(s) RICHERT ET AL.	
	Examiner Scott Bauer	Art Unit 2836	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 31 October 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 21-32 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 21-32 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 20 August 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>07/26/06</u> | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Objections

Claims 27 & 28 objected to because of the following informalities: Claims 27 & 28 are identical to claim 26. Appropriate correction is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

1. Claims 21, 23 & 32 are rejected under 35 U.S.C. 102(e) as being anticipated by Berthaud et al. (US 6,625,736).

With regard to claim 21, Berthaud et al., in Figure 1, discloses a configuration for n consumers (16, 18 & 20) of electric energy, of which m consumers are supplied simultaneously with energy, where $m < n$, and whereby a modular energy supply (10, 12 & 14) comprising k energy modules is provided, and whereby the sum of the power supplyable by the k energy modules is smaller than the power which would be necessary, if all n consumers simultaneously required electrical power, wherein a control (22) is provided which connects as many energy modules to respective one of

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the m consumers so that this consumer receives the power required by said consumer (column 2 lines 4-38).

With regard to claim 23, Berthaud et al., in Figure 1, discloses the configuration as claimed in claim 21, wherein the electric energy is realized by DC current (column 1 lines 35-39).

With regard to claim 32, Berthaud et al. discloses the configuration of claim 21 wherein all of the energies are of the same power (column 10, lines 18-21).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 22, 25 & 31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Berthaud et al. (US 6,625,736) in view of Sellers (US 5,584,974).

With regard to claim 22, Berthaud et al. teaches the configuration as claimed in claim 21.

Berthaud et al. does not teach that the consumers are sputter installations, with each cathode of a sputter installation having its own arc management.

Sellers et al., teaches an arc control and switching element protection for a pulsed DC cathode sputtering power supply wherein a power supply provides power to a sputter installation, with each cathode of a sputter installation having its own arc management (column 4 lines 25-28).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Berthaud et al. with Sellers, by using the power supply of Berthaud et al. to drive a plurality of cathode sputtering installations with arc management as taught by Sellers, for the purpose of providing power redundancy to the sputtering installations should one supply fail.

With regard to claims 25 & 31, Berthaud et al. teaches the configuration as claimed in claim 21 and further that the electric energy is realized by DC current.

Berthaud et al. does not teach that the electric energy is realized by pulsed DC current or that a pulse generator is assigned to each cathode of a sputter installation.

Sellers, in Figure 1, teaches that a DC power supply can be converted to a pulse DC current by a pulse generator (18) assigned to a cathode.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Berthaud et al. with Sellers, by using a pulse DC generator taught by Sellers to convert the DC current of the power supplies of Berthaud to pulsed DC current prior to sending the power to the load, for the purpose of

allowing the device of Berthaud et al. to be used to power various types of loads thus increasing the robustness of the circuit.

3. Claim 24 is rejected under 35 U.S.C. 103(a) as being unpatentable over Berthaud et al. (US 6,625,736) in view of Lau (US 5,444,333).

With regard to Claim 24, Berthaud et al. teaches the configuration as claimed in claim 21.

Berthaud et al. does not teach that the electric energy is realized by an AC current.

Lau, in Figure 1, teaches a circuit wherein the DC current of a DC power supply (12) is converted to AC current by an inverter (14) prior to being sent to the load (26).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Berthaud et al. with Lau, by using an inverter taught by Lau to convert the DC current of the power supplies of Berthaud to AC current prior to sending the power to the load, for the purpose of allowing the device of Berthaud et al. to be used to power various types of loads thus increasing the robustness of the circuit.

4. Claims 26-28 are is rejected under 35 U.S.C. 103(a) as being unpatentable over Berthaud et al. (US 6,625,736) in view of Mahler et al. (US 5,429,705).

With regard to claim 26-28, Berthaud et al. teaches the configuration as claimed in claim 21.

Berthaud et al. does not teach that each cathode is provided with its own adaptation network.

Mahler et al. teaches an apparatus for coating and/or etching substrates in a vacuum chamber wherein the power input of the device is provided with an adaptation network (column 2 lines 43-49).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Berthaud et al. with Mahler et al., by using the device of Berthaud et al. to power the adaptive network and sputter installation of Mahler et al., for the purpose of providing power redundancy to the sputtering installations should one supply fail.

5. Claims 29 & 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Berthaud et al. (US 6,625,736) in view of Milde et al. (US 6,420,863).

With regard to Claim 29, Berthaud et al. teaches the configuration as claimed in claim 21.

Berthaud et al. does not teach that the consumers are sputter installations with each installation including two cathodes to which one pole reversal unit is assigned.

Milde et al., in Figure 1A, teaches a method for monitoring an alternating current discharge on a double electrode wherein a power supply (5) is coupled to a switching unit wherein one cathode is coupled to a pole reversal unit.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Berthaud et al. with Milde et al., by using the power supply device of Berthaud et al. to supply power to the sputter installation of Milde et al., for the purpose of providing power redundancy to the sputtering installations should one supply fail.

With regard to Claim 30, Berthaud et al. teaches the configuration as claimed in claim 21.

Berthaud et al. does not teach that the consumer are sputter installations with each installation including two cathodes, of which the one cathode is connected to a pole of an AC voltage and the other cathode to the other pole of this AC voltage.

Milde et al., in Figure 1A, teaches a method for monitoring an alternating current discharge on a double electrode wherein the consumer are sputter installations with each installation including two cathodes, of which the one cathode is connected to a pole of an AC voltage and the other cathode to the other pole of this AC voltage.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Berthaud et al. with Milde et al., by using the power supply device of Berthaud et al. to supply power to the sputter installation of

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Milde et al., for the purpose of providing power redundancy to the sputtering installations should one supply fail.

Response to Arguments

Applicant's arguments filed 31 OCT 2006 have been fully considered but they are not persuasive. Applicants argue on page 4 that Berthaud does not teach that voltage sources are connected in view of the power required by a consumer. However, Berthaud teaches that the control point requests a new power source if the power limits of the power consumption devices are greater than the predetermined power limits (column 3 lines 44-48).

Applicants also argue that Berthaud teaches that some lower priority consumers can be switched off if the power sources cannot supply enough power to all of the consumers and that in the present invention, such a situation cannot appear since the power block will always provide sufficient power for any process.

However, this statement is opposite of what is claimed in lines 3-5 of claim 21 which states that the sum of the power supplyable by k energy modules is smaller than the power which would be necessary if all n consumers simultaneously required electrical power. As such, the power block would not be able to provide sufficient power for any process.

Applicants also argue that Berthaud does not teach that " $m < n$ ". However, Berthaud teaches that $m < n$ if the power supplies can only provide enough power for the m consumers. In other words, if out of n consumer devices, the control point does not

power two consumer devices, the remaining powered devices (m) would equal $n-2$ which is less than the total n.

Applicants further argue on page 5 that Berthaud does not teach the feature "whereby the sum of the power supplyable by the k energy modules is smaller than the power which would be necessary, if all n consumers simultaneously required electrical power" because a computer would supply consumers with electrical power at any time.

However, as Applicants point out, Berthaud teaches that the power supplies cannot supply all of the power necessary for all the consumers at once. This is the reason why Berthaud will not power a device that has a higher power need than the power supply can handle.

On page 5 Applicants argue that Berthaud does not teach the feature, "a control is provided which connects as many energy modules to respective one of the m consumers so that this consumer receives the power required by said consumer," and that "a set a linear inequations does not relate to the present invention". However, Berthaud teaches using the linear inequations in the control point for controlling the power supplied to the power consumption devices (column 3 lines 28-30).

In response to Applicants' arguments with regard to the Sellers reference, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986). Applicants argue that Sellers does not teach a plurality of sputter installations or a plurality of cathodes. However, Berthaud teaches a plurality of loads. The

combination of Berthaud in view of Sellers thus would teach a plurality of sputter installations and cathodes.

Lastly, Applicants further argue that no motivation was given to combine Berthaud with Lau, however, motivation was given on page 5 of the previous Office Action. Applicants also argue that Mahler et al. does not teach that each cathode is provided with its own adaptation network. However, Mahler et al. teaches this in column 2 lines 43-50.

Conclusion

6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Scott Bauer whose telephone number is 571-272-5986. The examiner can normally be reached on M-F 9am-6pm.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Brian Sircus can be reached on 571-272-2058. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center.(EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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22 JAN 07

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1-26-07

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